The Secret History of Constructivism at the Godwin-Ternbach Museum: Josef Albers' *Structural Constellation,* Karl Gerstner's *Carro 64,* & Jacob Drachler's *Agawam*

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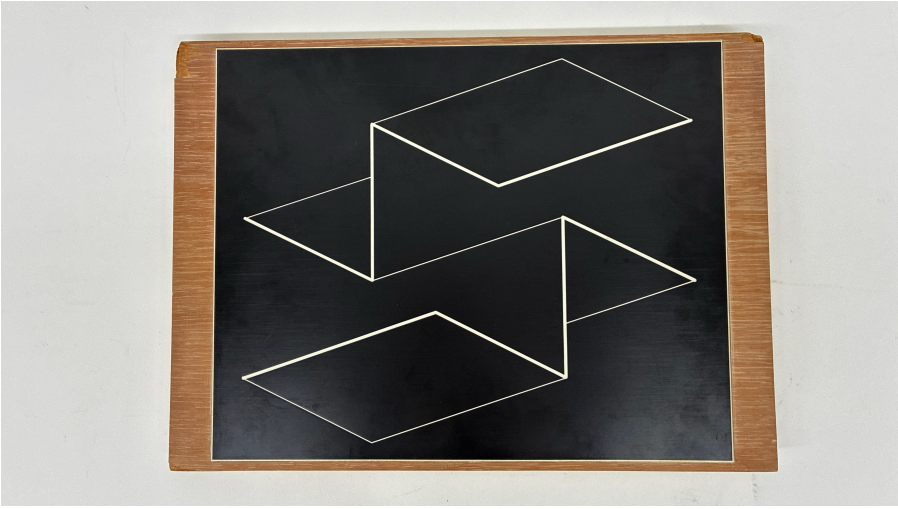
Sixteen years after he and Anni Albers fled Berlin in 1933, Josef Albers began his two major studies *Structural Constellation* and *Homage to the Square.* Beginning a new life again in 1949, Albers was teaching and in transition – this time, leaving Black Mountain College for Yale University. Albers taught foundations at three schools: Bauhaus, Black Mountain, and Yale University. A primary course for all students, Albers's year-long "constructional program," "[attempted] a step-by-step derivation or 'construction' of all concepts from certain fundamental concepts."[1] Studies relied upon the Russian Constructivist principles of *faktura,* tectonics, and construction.

First as a student and later a teacher at the Bauhaus, Albers's education of foundations relied upon "key precepts" which could be applied across disciplines including architecture and design.[2] Expressed through experimentation, these principles were studied closely as if his class were a scientific laboratory or workshop. Investigating an object's material, its three-dimensional qualities, and production processes, further elements of Albers's teachings researched space and illusion. Practicing studio techniques of comparison and competition, Albers's foundational classes allowed students to gain experiential understanding of materials and how they worked. In these settings, which were often co-taught by master craftsmen and fine artists, distinctions between fine and applied arts were blurred.

Aligned with the experiment and test subject, both *Structural Constellation* and *Homage to the Square* are comprised of multiple iterations. *Structural Constellation* (1949–1961) includes

[1] Rudolph Carnap, as quoted in Eva Díaz, "The Ethics of Perception: Josef Albers in the United States," *Art Bulletin,* p. 275.
[2] Leah Dickerman, "Bauhaus Fundaments," *Bauhaus 1919–1933,* p. 15.

engravings, prints, murals/installation/public sculpture, and preparatory drawings.[3] Godwin-Ternbach Museum holds one item of this total project: an engraving on formica, *Structural Constellation,* dated 1961 (2004.3.9).

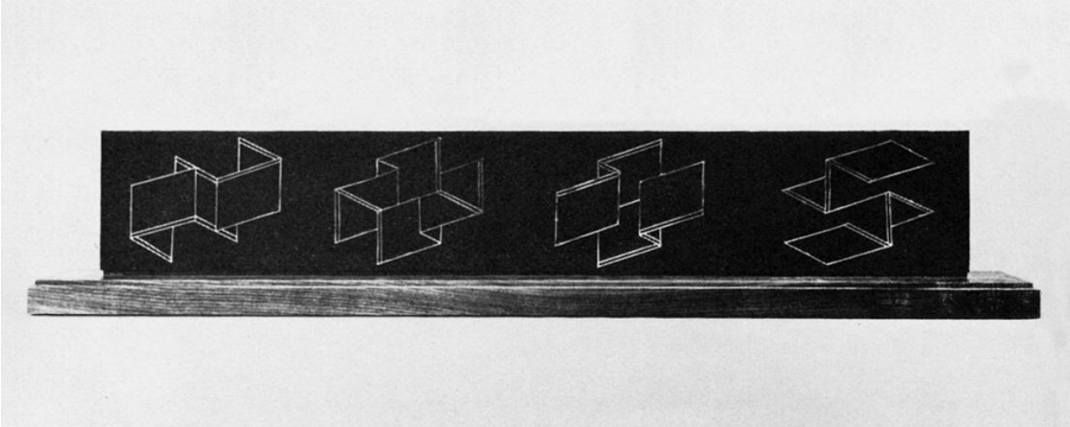


In this moment between Black Mountain and Yale, Albers showed preliminary drawings of *Structural Constellation* to architect Louis Kahn, then director of Yale's School of Art's Plastics Collaborative. Soon after, while Albers was teaching at Cincinnati's Art Academy, this series' first black and white vinylite pieces were produced at Formica, Co., a large plastic manufacturer located nearby.[4] Plastic, a new material at the time, fascinated both Albers and Kahn, and Albers explored its material qualities, capabilities, and manufacturing.

[3] Díaz, p. 281.
[4] Frederick A. Horowitz and Brenda Danilowitz *Josef Albers: To Open Eyes,* p. 45.

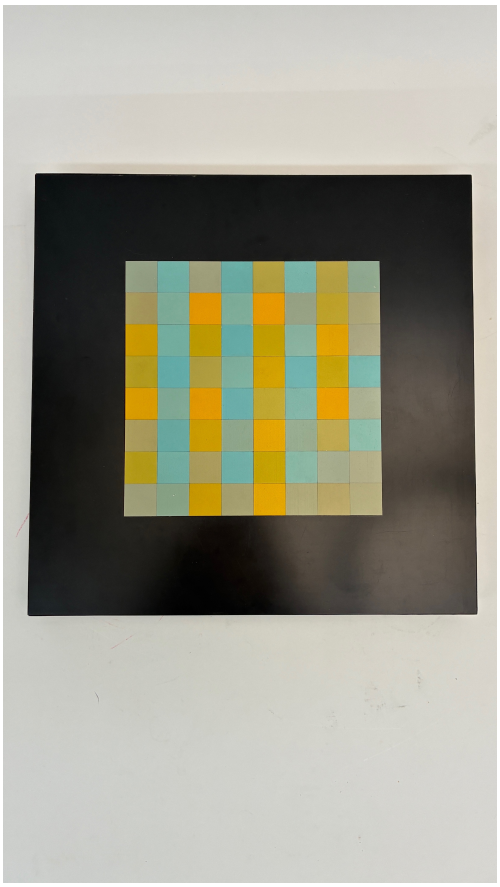
Measuring at 11” x 15” x 2,” *Structural Constellation* (1961) is a machine engraved vinylite, or plastic laminate, mounted on wood. The engraving effects straight, intersecting lines, revealing a lower layer of white plastic. Initially drawn on graph paper with a ruler, these final, sharply defined lines explore right angles, parallel lines, rectangular shapes and triangles. lighter lines recede into space while heavier lines indicate proximity. A floating form, the two-dimensional rendering suggests an impossible three-dimensional object. Doubled shifting shapes appear to move forward and backward at the same time, presenting multiple perspectives on the same object, from both above and below.

GTM’s shape appears again as the last of a sequence of four on the reflective side of Stamford University’s posthumous *Albers Wall* (1973–1980). .” One of many, the variant propelled Albers’s extensive investigations. Describing this final form, Albers said it had “liberated ease…[and is] spiritual, non-possessive.”[5] Not just abstractions to Albers, these forms expressed feelings and associations.



[5]Albers described these four shapes: ’The first of what he called "constellations," at the left side of the slab, intones the complexities of ownership and interpersonal relations. The second tectonic shapes are opening and outward bound, while still firmly anchored within each other. The third design evolves into a dynamic fluidum of contradictory directions, the breakup of systems. The fourth construction floats with liberated ease; it is spiritual, non-possessive, and, as Albers said, "owns but does not behave as if it did." It completes the orderly progression into a stable flux. ’François Bucher, “Notes on the Last Works of Josef Albers,” *boundary 2,* p. 933.

Constructivist procedures are also found in Karl Gerstner's *Carro 64* (1962) 2011.18.01. Comprised of sixty-four die-cut aluminum cubes each painted a gradient of one of two colors, *Carro 64* is permutable and can be rearranged in countless ways. A presentation-device, each piece is precision fit into an adjustable black frame.[6] Its central image is square, at 16" x 16", and has uniform characteristics resembling a street sign. With the appearance of a prototype, *Carro 64* presents rational systems proposing progression and change.





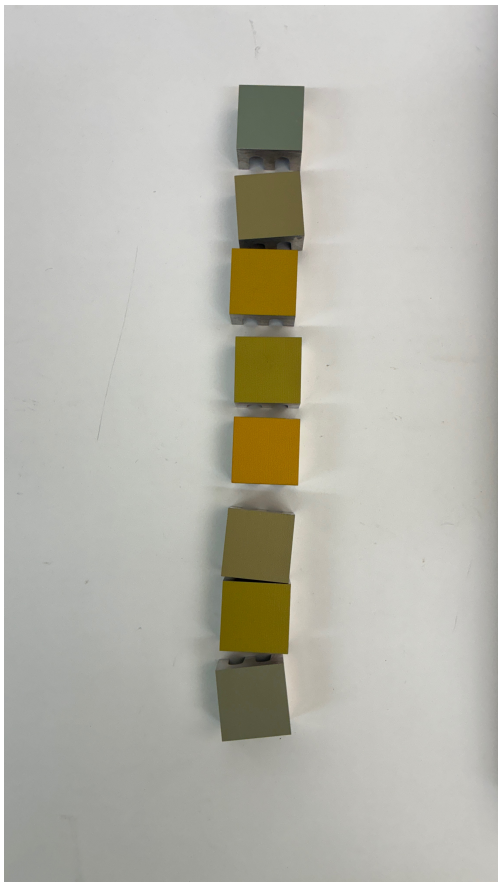
[6] Hal Foster, "Some Uses and Abuses of Russian Constructivism," *Art into Life: Russian Constructivism 1914–1932,* p. 251.

Tension holds *Carro 64* together via two bolts located on a 90˚ angle; each are found on the frame's center top and center left. A hexagonal wrench releases the piece, and it's form can be disassembled into micro-units each separately identified with a printed number on it's side. With the collaboration of the spectator, suggested guides provide maps for new arrangements. Alternately, the spectator (or chance) decides the arrangement of the total piece. Once rearranged, the piece can be locked up again.

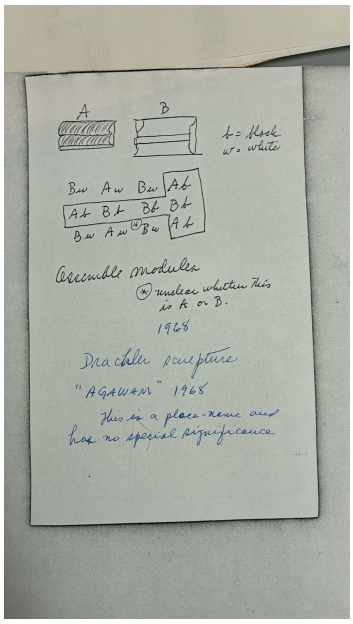
Providing a grid for distribution, *Carro 64* allows loose elements to be assembled and reassembled in different ways. Gerstner's *Designing Programmes* (2008.00.106) details how movement can be created within a static structure through visual effects of grouping gradations, contrasts, alternate colors, diagonals, positives and negatives, and reflections.[7] Further patterns can be created as a checkerboard, a spiral, or interlace according to an X / Y axis. Understood by Constructivists as "the primordial element of visual art," mathematics provides procedures through which patterns, rhythms and relationships can be developed logically, through objective means and procedures.[8] Similar techniques are found in ancient lattice-work, Arabic nonfigurative design, and in patterned mosaics. Not a window on the world, Gerstner's piece is a matrix for developing abstractions, akin to the weaver's loom and presaging digital logic.[9]

[7] Karl Gerstner, *Designing Programmes,* p. 76.
[8] Max Bill, "The Mathematical Approach in Contemporary Art," as quoted in George Rickey, *Constructivism: Origins and Evolution*, p. 65.
[9] Dickerman, p. 21.





Another piece recalling the prototype is *Agawam* (1968) by Jacob Drachler (73.44). Currently on view in the museum's lobby in the exhibit *Wunderkammer II, Agawam* suggests architectural monumentality while on the shelf it measures 16" x 12" x 5". Comprised of twelve stacked undulating forms, this monochromatic sculpture holds further similarities to Gerstner's piece in the action of dispersal and arrangement. In the archives, Drachler's hand-drawn diagram accompanies this piece, presenting a guide for arrangement.



Two three-dimensional shapes create the texture of the piece: one shape is pinched and the other double barreled. Porcelainized aluminum, each piece is lightweight and can be picked up with one hand. Because each unit creates a different physical response in the arranger, *Agawam* requires manipulation. One form makes the arranger's hand shape into a pinch, while the other shapes it into a wider grip. The bodily focus of this piece, with its adaptive qualities, necessitates the gestural engagement of an arranger / interpreter who organizes and completes the total object.

In 1975, under the guidance of Amy Golding, an art critic who taught in Queens College's Art Department, Drachler gave *Agawam* to Queens College. In his donation letter, Drachler wrote, "in honor of George Perle, composer and member of the graduate music faculty…[considering] it a pleasing and appropriate circumstance that…the sculpture…[embodies] a kind of serial approach in art, for, as you know, Professor Perle is a distinguished exponent of the serial



approach in music."[10] Seriality, informed by the Fordist assembly line, opened up alternatives to the traditional studio. Like prefabricated architecture, endless combinations of tones, colors, and shapes can be produced through juxtaposing different relationships between basic and standard forms, producing variants. Gerstner also associated his pieces with music, calling his variable works "programmed compositions."[11] Associating color with sound, his study of color gradients employ musical terms, such as: sequences and intervals.[12]

Through the use of industrial plastics, aluminum, and enamel paint, each of these works, *Structural Constellation* (Albers, 1961)*, Carro 64* (Gerstner, 1962)*,* and *Agawam* (Drachler,

[10] Donor letter, by Jacob Drachler. Jacob Drachler file. Godwin-Ternbach Museum, Klapper Hall, Queens College, Flushing, NY.
[11] Willy Rotzler, *Constructive Concepts,* p. 139.
[12] Gerstner, p. 77.

1968) were produced through factory processes and materials. *Agawam,* a Minimalist serial object, marks a moment in time when the self-aware artist accessed what can be seen as contradictory today: both phenomenology and the factory assembly line. In his study of twentieth-century avant-gardes, Hal Foster considers Minimalism to be the final stage of Modernism, in which "the formalist autonomy of art is at once achieved and broken up, [Minimalism was a moment] in which the ideal of pure art becomes the reality of one more specific object among others."[13]

Albers's *Structural Constellation,* revealing process in visual depth perception and in industrial production, anticipates the further adaptive developments of Gerstner's *Carro 64* and Drachler's *Agawam.* Expressing Albers's foundational schema in marking transformation and in experiential self-awareness, each piece is produced through what Swiss artist Richard Lohse called a complex of logical sequences of "endless series simultaneously controlled."[14] Each of these pieces are presented with a detached quality, not demanding attention from the viewer, but engaging the viewer through the possibility of variation. Phenomenological, the spectator becomes aware of themselves through engagement with the works, through active construction of non-representative images, and through their arrangement in space.

[13] Hal Foster, *Return of the Real,* p. 54.
[14] Richard P. Lohse, "Space and Principles," as quoted in Rickey, *Constructivism,* p. 147.

References

Bucher, François. *Josef Albers: An analysis of his graphic constructions,* New Haven: Yale University Press, 1961.

Bucher, François. "Notes on the Last Works of Josef Albers," *boundary 2,* Vol. 5, No. 3 (Spring, 1977): 931-934.

Díaz, Eva. "The Ethics of Perception: Josef Albers in the United States," *Art Bulletin,* Vol. 90, No. 2 (June 2008): pp. 260-285.

Dickerman, Leah. "Bauhaus Fundaments," *Bauhaus 1919–1933: Workshop for Modernity,* New York: The Museum of Modern Art, 2009.

Godwin-Ternbach Museum, Queens College, Flushing, NY, Administrative Archives, Jacob Drachler File.

Foster, Hal. *Return of the Real: The Avant-Garde at the End of the Century,* Cambridge, MA: MIT Press, 1996.

Foster, Hal. "Some Uses and Abuses of Russian Constructivism," *Art Into Life: Russian Constructivism 1914–1932,* New York: Rizzoli, 1990.

Gerstner, Karl. *Designing programmes: Programme as typeface, Programme as typography, Program as picture, Program as method,* New York: Visual Communication Books, Hastings House, 1964.

Horowitz, Frederick A. and Brenda Danilowitz. *Josef Albers: To Open Eyes: The Bauhaus, Black Mountain College, and Yale,* London: Phaidon Press, 2014.

Meyer, James. *Minimalism: : Art and Polemics in the Sixties,* New Haven: Yale University Press, 2004.

Rickey, George. *Constructivism: origins and evolution,* New York: G. Braziller, 1995.

Rotzler, Willy. *Constructive Concepts: A History of Constructive Art from Cubism to the Present,* Zurich: ABC Edition, 1977.